

Serial No. 09/423,415

June 14, 2004

Reply to the Office Action dated February 12, 2004

Page 2 of 10

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-10 (canceled)

Claim ²~~1~~ (previously presented): The apparatus of claim ¹~~14~~, further comprising a frame buffer, wherein said processor stores image data in said frame buffer.

Claim ³~~12~~ (previously presented): The apparatus of claim ¹~~14~~, wherein said processor reads decompressed texture data contained in said texture buffer and performs image processing of said decompressed texture data for conversion to image data.

61
Claim ⁴~~13~~ (previously presented): The apparatus of claim ¹~~14~~, wherein said processor reads compressed texture data from said first storage device, said data decompression circuit decompresses said read compressed texture data, and said processor stores said decompressed texture data in said texture buffer.

Claim ¹~~14~~ (currently amended): An apparatus for image processing, comprising:
a processor including a data decompression circuit;
a first storage device having texture data and electronically coupled to said processor; and
a texture buffer having decompressed texture data and electrically coupled to said processor; wherein
transmission of texture data between said texture buffer and said processor is faster than transmission of texture data between said storage device and said processor; and

Serial No. 09/423,415

June 14, 2004

Reply to the Office Action dated February 12, 2004

Page 3 of 10

said first storage device is defined by a CPU work memory or an external memory device.

5
Claim ~~15~~ (currently amended): An apparatus for image processing, comprising:
a processor including a data decompression circuit;
a first storage device having texture data and electronically coupled to said processor;

a texture buffer having decompressed texture data and electrically coupled to said processor; and

a first data bus and a second data bus, wherein said first data bus carries texture data between said texture buffer and said processor faster than said second data bus carries texture data from said storage device and said processor; and

said first storage device is defined by a CPU work memory or an external memory device.

6
4
Claim ~~16~~ (previously presented): The apparatus of Claim ~~13~~, wherein said processor including a FIFO storage device which temporarily stores said read compressed texture data.

7
6
Claim ~~17~~ (previously presented): The apparatus of Claim ~~16~~, wherein said data decompression circuit receives said read compressed texture data from said FIFO storage device.

8
4
Claim ~~18~~ (previously presented): The apparatus of Claim ~~13~~, wherein said processor includes a palette transformation circuit, said palette transformation circuit performing palette transformation of said decompressed texture data.

9
4
Claim ~~19~~ (previously presented): The apparatus of Claim ~~13~~, wherein said processor includes a mip map generation circuit, said mip map generation circuit

Serial No. 09/423,415

June 14, 2004

Reply to the Office Action dated February 12, 2004

Page 4 of 10

generating a mip map of said decompressed texture data.

Claim ¹⁰~~20~~ (previously presented): The apparatus of claim ¹~~14~~, wherein said texture data in said first storage device is compressed.

Claim 21 (canceled)

Claim ¹²~~22~~ (previously presented): The method of claim ¹¹~~23~~, further comprising the step of converting said decompressed texture data to image data, and storing said image data in a frame buffer.

Claim ¹¹~~23~~ (currently amended): An image processing method comprising the steps of:

providing compressed texture data in a storage device defined by a CPU work memory or an external memory device;

reading said compressed texture data from said storage device and decompressing said compressed texture data;

storing said decompressed texture data in a texture buffer; and

providing a processor, and transferring data between said texture buffer and said processor faster than transferring data between said storage device and said processor.

Claim ¹³~~24~~ (previously presented): The method of claim ¹¹~~23~~, further comprising the step of performing palette conversion of said decompressed texture data prior to said step of storing said texture data.

Claim ¹⁴~~25~~ (previously presented): The method of Claim ¹¹~~23~~, further comprising the step of generating a mip map of said compressed texture data prior to said step of storing said decompressed texture data.

Serial No. 09/423,415

June 14, 2004

Reply to the Office Action dated February 12, 2004

Page 5 of 10

15
Claim ~~26~~¹⁵ (previously presented): The method of claim ~~23~~¹¹, wherein said step of storing said decompressed texture data includes the step of updating said decompressed texture data in said texture buffer with new decompressed texture data.

16
Claim ~~27~~¹⁶ (previously presented): The apparatus of claim ~~15~~⁵, further comprising a frame buffer, wherein said processor stores image data in said frame buffer.

17
Claim ~~28~~¹⁷ (previously presented): The apparatus of claim ~~15~~⁵, wherein said processor reads decompressed texture data contained in said texture buffer and performs image processing of said decompressed texture data for conversion to image data.

W
18
Claim ~~29~~¹⁸ (previously presented): The apparatus of claim ~~15~~⁵, wherein said processor reads compressed texture data from said first storage device, said data decompression circuit decompresses said read compressed texture data, and said processor stores said decompressed texture data in said texture buffer.

19
Claim ~~30~~¹⁹ (previously presented): The apparatus of claim ~~29~~¹⁸, wherein said processor includes a FIFO storage device which temporarily stores said read compressed texture data.

20
Claim ~~31~~²⁰ (previously presented): The apparatus of claim ~~30~~¹⁹, wherein said data decompression circuit receives said read compressed texture data from said FIFO storage device.

21
Claim ~~32~~²¹ (previously presented): The apparatus of claim ~~29~~¹⁸, wherein said processor includes a palette transformation circuit, said palette transformation circuit performing palette transformation of said decompressed texture data.

Serial No. 09/423,415

June 14, 2004

Reply to the Office Action dated February 12, 2004

Page 6 of 10

97
Claim ~~33~~²³ (previously presented): The apparatus of claim ~~29~~¹⁸, wherein said processor includes a mip map generation circuit, said mip map generation circuit generating a mip map of said decompressed texture data.

Claim ~~34~~²³ (previously presented): The apparatus of claim ~~15~~⁵, wherein said texture data in said first storage device is compressed.
